

VELADOR

Science-Based Sea Turtle Conservation Since 1959

Issue 1, 2018

The Bermuda Turtle Project Celebrates its 50th Anniversary



David Godfrey / STC

The Bermuda Turtle Project (BTP), a joint research and protection program of the Sea Turtle Conservancy (STC) and the Bermuda Zoological Society (BZS), is celebrating its 50th anniversary this year – making it by far the longest-continuous sea turtle conservation program that focuses on the animal in its marine environment. To celebrate the milestone, STC

and BZS have produced a beautiful documentary about the program, and we are planning a series of events that will unfold over the course of 2018. Among these events will be the release of an official commemorative stamp series in Bermuda that celebrates the Bermuda Turtle Project.

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... from cover

As we reflect on the BTP's half century of work, it is appropriate to recall the roots of the program and draw attention to some of its many accomplishments so far. In the mid-1960s, Sea Turtle Conservancy (known then as the Caribbean Conservation Corporation) was carrying out its groundbreaking conservation program – Operation Green Turtle. The project was a unique conservation experiment set up by STC scientific founder Dr. Archie Carr and supported by the US Navy. The goal was to reestablish green turtle nesting colonies at beaches around the Caribbean where they had been wiped out to feed human demand for turtle meat. Although ultimately unsuccessful, it was a bold and unprecedented conservation strategy, and it laid the groundwork for what would grow into a global movement to protect sea turtles.



BTP in-water course participant.

One of the places where hatchling turtles were taken by the thousands for release was the small island nation of Bermuda. Caribbean in climate and appearance, Bermuda is actually southeast of Cape Hatteras, North Carolina. Old sailors' logs tell of great fleets of turtles in the waters around Bermuda as well as healthy nesting populations on the island. By 1620, the government was sufficiently concerned about the wanton exploitation of sea turtle resources to pass "*An Act Agaynst the Killinge of Ouer Young Tortoyses,*" which is the earliest known legislation regarding sea turtles anywhere in the world. Unfortunately, the law failed to halt the extirpation of the breeding colony, and by the 1920s

nesting by green turtles had ceased on the island. Thus, by the time Dr. Carr and the STC had been formed in 1959, the nesting population had been entirely wiped out in Bermuda and only immature green turtles were found to inhabit the island's extensive shallow-water habitats.

STC Board member and philanthropist Dr. Clay Frick, who owned a home in Bermuda (on what is now known as Frick Island) took a keen interest in the hatchling release program and in the little turtles found around the island. Dr. Frick and his family took up the cause to help recover Bermuda's turtles, assisting STC with the hatchling shipments from Costa Rica and launching what is now known as the Bermuda Turtle Project. The BTP was formally initiated in 1968 by Dr. Frick, in cooperation with the Bermuda Government. Since 1991, the project has been a collaborative effort of STC, BZS and Drs. Anne and Peter Meylan. Throughout its history, the program has received financial support from the Frick family. Work carried out under the BTP falls into three main project activities: 1) Gathering data about Bermuda's sea turtles; 2) training scientists; and 3) public education.

VELADOR {bel.a.dor}

In Caribbean cultures, **Velador** translates as "one who stands vigil" —referring to turtle hunters who waited at night for turtles to come ashore. Now STC claims this title for its newsletter, and around the world STC's researchers and volunteers are replacing poachers as the new veladors. The **Velador** is published for Members and supporters of the nonprofit **Sea Turtle Conservancy**. STC is dedicated to the conservation of sea turtles through research, advocacy, education and protection of the habitats upon which they depend.

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The research efforts of the BTP are focused on filling in the information gaps on green turtle biology so that successful protection may be implemented. Bermuda is one of a few locations worldwide where post-pelagic, immature green turtles occur in the complete absence of adults. It may be the best site in the world where green turtles of this age can be studied in their natural habitat. Whereas most studies of sea turtles take place on nesting beaches, Bermuda provides scientists and resource managers with a unique opportunity to study the little understood juvenile stage of the green turtle.



Dr. Clay Frick helps to weigh a young green turtle in Bermuda circa 1970.

In addition to the annual research, every year since 1996 the BTP has offered an international in-water training course on sea turtle biology and conservation. It brings students and scientists from around the world to Bermuda to study the pelagic and juvenile phases of the marine turtle life cycle, turtle biology and conservation through observation of the animals in their marine habitat, necropsies, and a capture-tag-release study.

To date, about 4,000 individual green turtles and 140 hawksbills have been captured by the project, tagged and released so that information can be obtained on size structure of the population, genetic identity, sex ratios, growth rates, site fidelity, and migratory patterns. More than 1,000 recaptures have been made of tagged green turtles by the project in Bermudian waters, providing one of the best data sets in the world on growth rates and movements of free-ranging, immature green turtles. Green turtles tagged in Bermuda have been captured as far away as Florida, Cuba, Nicaragua and Venezuela; the long-distance tag returns are particularly important because they shed light on the migrations of the green turtles that grow up in Bermuda waters.

A recently-completed genetic survey carried out as part of the BTP found that green turtles growing

up in Bermuda come from several nesting beaches, including Florida, Costa Rica and northern South America – many of the places where STC carries out systematic nesting beach monitoring and conservation projects for adult green turtles.

Satellite tracking has revealed important information about the use of home ranges by green turtles in Bermuda. They appear to utilize a particular spot near coral reefs or rocks to sleep at night and then return to a main foraging ground during the day to graze on sea grasses, not unlike behavior observed in adult foraging

grounds such as the Miskito Coast of Nicaragua. At a certain point in their maturity, they depart Bermuda waters, often following a bee-line route, to join an adult turtle colony, where they likely remain for the duration of their lives, aside from bi-annual migrations to their natal beaches (where they were born) to mate and nest.

Over the last half century, the BTP has discovered nearly everything that is known about the biology and life history of Bermuda's sea turtles. In the process, the project has provided training for generations of sea turtle biologists and helped contribute to global sea turtle conservation efforts. The ongoing work to protect green turtles that reside in Bermuda during an important phase of their lives is helping recover this species in the Western Hemisphere. We hope STC members and supporters will join us in celebrating the Bermuda Turtle Project's 50th anniversary, and we invite you to watch our new documentary about the project, which will be available through STC's website on March 23rd. That is the same date that the government of Bermuda will release a special stamp series commemorating the 50th Anniversary of the BTP. 🐢

By David Godfrey
STC Executive Director

STC Opposes Effort to Downlist Protections for Leatherback Turtles

Leatherback sea turtles are ancient, giant reptiles. Named for their unique shell composed of thin rubbery skin, they can dive the deepest and travel the furthest among all seven sea turtle species on earth. Leatherbacks have traveled the globe for millions of years, but they face a number of mostly human-caused threats to their survival and recovery.

One of the greatest threats they face is being accidentally caught by commercial fishing operations. When they are caught underwater in nets or on baited lines, they drown if they can't reach the surface for air. They can also sustain internal injuries from hooks or external injuries from entanglement, including strangulation or amputation. In October of last year, a New Jersey-based organization representing commercial fishing interests quietly introduced a federal petition to classify the NW Atlantic leatherback population as a distinct population and to change the status of this population under the Endangered Species Act from "endangered" to "threatened."

In the petition, the group asserts that the NW Atlantic leatherback population (including leatherbacks that nest in Florida, Costa Rica, and Panama) should be listed as "threatened" because it is "not currently at risk of extinction (i.e., endangered) due to its overall population size." But the scientific evidence submitted with the petition did not take into account data from 2014 and forward that disputes this claim. In Florida, leatherback nesting has decreased since

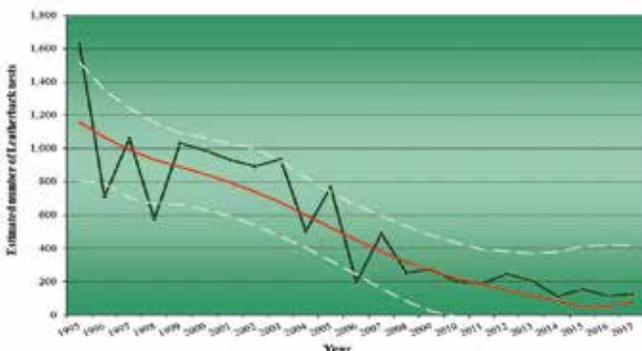


Figure 1. Tortuguero Leatherback Nesting

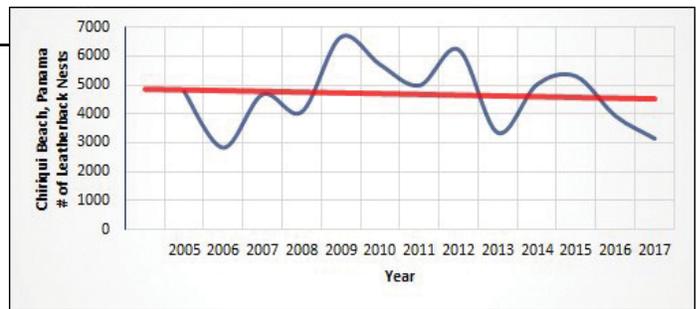


Figure 2. Panama Leatherback Nesting

2014, according to the Florida Fish and Wildlife Conservation Commission. In addition, over the last two decades, STC has documented a severe decline in leatherback nesting at Tortuguero, Costa Rica (see Figure 1). Furthermore, the nesting trend for this species at Chiriqui Beach, Panama, which had shown positive growth over a decade ago, actually shows a slight decline since 2005 (see Figure 2).

The future of leatherback sea turtles is also at risk due to climate change and global warming. Following a global trend, south Florida sea turtle hatchlings are becoming increasingly female due to warmer-than-average sand temperatures. Hot sand is also causing turtle embryos to overheat in their nests at STC's research sites in Panama, reducing the hatching success rate to less than 20 percent in many areas monitored by STC.

If this population of leatherback sea turtles is downgraded to "threatened," STC worries that commercial fisheries and other industries will take less care in reducing incidental "take," or the accidental killing of leatherback sea turtles, and federal authorities will be less focused on the urgency with which this species needs protection.

NOAA is accepting public comment on this petition. STC has submitted formal comments based on our own scientific data; however, anyone interested in sharing their opinion on the topic may do so online by visiting this site: <https://www.regulations.gov/document?D=NOAA-NMFS-2017-0147-0001>. We hope STC members will urge the federal government to reject this petition and keep leatherback sea turtles listed as "endangered" so they benefit from full protection under the Endangered Species Act. 🐢

By David Godfrey & Stacey Marquis
STC Executive Director / Lighting Specialist

Lighting Project Extension

The Sea Turtle Conservancy's (STC) lighting team received some exciting news during the holidays: Our lighting retrofit work in the Florida Panhandle has been extended until 2019! The National Fish and Wildlife Foundation (NFWF) awarded STC an extension and additional funding to retrofit 26 new properties with sea turtle friendly lighting. The original project period was from March 15, 2016 – August 31, 2018, and NFWF extended the project to October 21, 2019. In addition, STC will continue to retrofit properties in Bay, Okaloosa, Santa Rosa and Escambia counties.

Florida Fish and Wildlife Conservation Commission (FWC) recommended 11 of the 26 properties. The 11 properties are situated within a 1,000 foot buffer adjacent to publicly-owned conservation lands in the Florida Panhandle. In addition to the properties referred by FWC, STC identified 15 new properties that are in need of retrofit. The properties are located on active sea turtle nesting beaches that are known to have exterior lights that contribute to sea turtle hatchling disorientation. Without the extension and additional funding, STC would not have been able to retrofit these properties.

In addition to having the means to retrofit more properties in our target region, NFWF approved



This photo of a marked nest in front of a property in Destin taken by STC demonstrates why our lighting retrofit program is needed.

STC to begin identifying properties with problematic lighting on the nesting beaches of Florida's southwest Gulf Coast. These beaches host the highest density of sea turtle nesting on U.S. beaches in the Gulf of Mexico. STC hopes to receive future funding for retrofits along Florida's southwest coast to darken these important nesting beaches and ultimately reduce disorientations in the region.

For more information about STC's lighting program, visit www.conserveturtles.org. 

*By Stacey Marquis
STC Lighting Specialist*

Adoptions



Don't forget to adopt a turtle for all of those special occasions this Spring! For a donation of \$30 or more, your gift recipient will receive a personalized turtle adoption packet. You can name your own turtle or choose to follow one of our satellite tracked turtles. Want to make your gift extra special? Adopt a turtle at the \$55 level and receive our NEW sea turtle magnet set! Visit <https://conserveturtles.org/support-stc-join-stc-and-adopt>

*Easter- April 1, 2018 Mother's Day- May 13, 2018
Endangered Species Day- May 18, 2018
World Sea Turtle Day- June 16, 2018
Father's Day- June 17, 2018*



Adopted Turtles Return to Tortuguero

Each year from July to September, Sea Turtle Conservancy researchers tag and collect data on green turtles that nest on the beaches of Tortuguero, Costa Rica. Many of these turtles are “adopted” by individuals or families in a symbolic show of support for STC’s work. If a turtle that you or your family sponsored was observed on the beach during the 2017 nesting season, your name will appear in list below:

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Adventures by Disney

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Caroline Howard



Carel Iedema
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Beth King
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Kimberly Konka
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Sharon Kotsovos
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Velasco
Paulina Limon Ruiz
Velasco

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Noa and Bella Lubotzky/Drummond
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Jenny Mastantuono
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Steve McClain
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Christina McCormack
Rick & Dianne McCoy
Rebecca McCrary
Celia McMurri
Sydney and Eli Melet
Alexis Meyer
Leslye & Mike Mize
Gail & Tom Monesson/Donelan
Sarah Moslowski

Joost Mous
Albert Muehlberger
Christina Napier
Rachel Nelson
Alexandra Nelson
Lynn Nesbitt
Julie Kijan Ngimat
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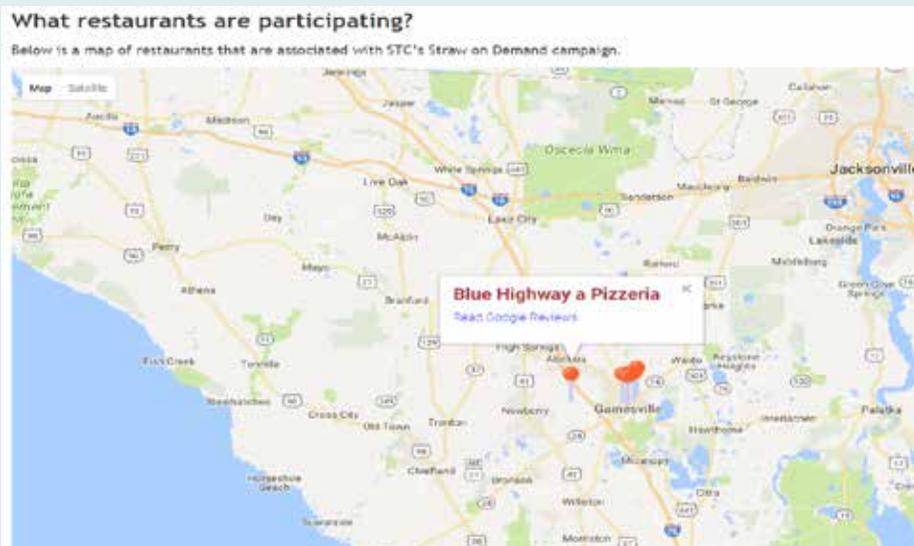
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The “Last Straw” Campaign

Help STC reduce plastic waste at local restaurants

Sea Turtle Conservancy is kicking off 2018 by working with Florida restaurant owners to change their straw policies. In Gainesville, where STC is based, six restaurants have either adopted a straw-on-demand policy or displayed STC’s signage to discourage customers from taking a straw. This year, STC will also target restaurants on Florida’s east coast!

To be associated with STC’s program, restaurant owners can either 1) only offer straws on demand or not have them available at a self-serve drink station or 2) switch to paper straws, ideally offering them on-demand. Through our collaboration with the Lonely Whale’s Strawless Ocean campaign, restaurant owners who participate in STC’s straw program can order Aardvark paper straws at a discounted price.



If you’d like to see what restaurants are already participating, you can visit conserveturtles.org > *Get Involved* > *Reducing Plastic Waste*. There, you will find a description of the problem, a summary of STC’s program, an interactive map of participating restaurants, and educational materials that you can give to your local restaurants to encourage them to make the switch.

When a restaurant signs on to participate in STC’s straw campaign, they will be added to a map on our website for our followers to see.

There are a lot of restaurants in Florida, and STC needs your help! Do you have a coastal restaurant near you that you would like to participate? Email Stacey Marquis at stacey@conserveturtles.org and let her know about the restaurant. 

By Stacey Marquis
STC Lighting Specialist